AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Original) A temperature compensated oscillator, comprising:

an oscillation circuit whose oscillation frequency varies with a temperature change;

an output line for outputting a signal based on an oscillation output of said oscillation circuit;

a temperature detection circuit for detecting a temperature state near said oscillation circuit; and

a temperature compensation circuit for keeping a frequency of the signal outputted to said output line substantially constant based on an output from said temperature detection circuit,

wherein a selection means is provided which selects whether to enable or disable a temperature compensation function of said temperature compensation circuit.

2. (Previously Presented) The temperature compensated oscillator according to claim 1, further comprising:

a variable frequency division circuit between said oscillation circuit and said output line,

wherein said selection means has means for allowing said temperature compensation circuit to vary a frequency division ratio of said variable frequency division circuit depending on a temperature detected by said temperature detection circuit when enabling the temperature compensation function of said temperature compensation circuit, and fixing the frequency division ratio of said variable frequency division circuit to a predetermined value when disabling the temperature compensation function.

3. (Currently Amended) The temperature compensated oscillator according to claim 1, ~~wherein said oscillation circuit has an oscillation capacitor, and~~

wherein said selection means has a selection circuit ~~means~~ for allowing said temperature compensation circuit to vary a capacitance value of ~~said~~ an oscillation capacitor having said oscillation circuit depending on a temperature detected by said temperature detection circuit when enabling ~~the~~ said temperature compensation function ~~of said temperature compensation circuit~~, and for fixing ~~the capacitance value of~~ said oscillation capacitor having said oscillation circuit to a predetermined capacitance value when disabling ~~the~~ said temperature compensation function.

4. (Original) The temperature compensated oscillator according to claim 3,

wherein said oscillation capacitor includes a variable capacitor which varies in capacitance value in accordance with a voltage applied thereto, and said temperature compensation circuit has means for changing the voltage applied to the variable capacitor to change the capacitance value of said oscillation capacitor.

5. (Original) The temperature compensated oscillator according to claim 3,

wherein said oscillation capacitor includes a plurality of fixed capacitors, and said temperature compensation circuit has means for changing connection states of the plurality of fixed capacitors to change the capacitance value of said oscillation capacitor.

6. (Original) The temperature compensated oscillator according to claim 4,

wherein said selection means has means for fixing the voltage applied to the variable capacitor to a predetermined value when fixing the capacitance value of said oscillation capacitor to the predetermined capacitance value.

7. (Original) The temperature compensated oscillator according to claim 4,

wherein said selection means has means for separating the variable capacitor so that the variable capacitor is not included in said oscillation capacitor when fixing the capacitance value of said oscillation capacitor to the predetermined capacitance value.

8. (Cancelled).

9. (Previously Presented) The temperature compensated oscillator according to claim 1, further comprising:

a compensation data storage circuit which stores temperature compensation data of said temperature compensation circuit.

10. (Currently Amended) The temperature compensated oscillator according to claim [[1]] 2, further comprising:

a selection information storage circuit which stores control information for controlling a selection state of said selection means; and

a compensation data storage circuit which stores temperature compensation data of said temperature compensation circuit,

wherein said selection information storage circuit and said compensation data storage circuit form an integrated storage circuit.

11. (Previously Presented) The temperature compensated oscillator according to claim 1, further comprising:

a control information input terminal for inputting from outside control information for controlling a selection state of said selection means.

12. (Original) The temperature compensated oscillator according to claim 11,

wherein said control information input terminal is an external terminal provided on a package constituting said temperature compensated oscillator.

13. (Cancelled).

14. (New) The temperature compensated oscillator according to claim 3, wherein said selection circuit has a switch to enable said temperature compensation function and a switch to disable said temperature composition function.

15. (New) The temperature compensated oscillator according to claim 14, wherein said switch to disable said temperature compensation function is means for fixing the capacitance value of said oscillation capacitor to a predetermined capacitance value; and

a signal from said means for fixing said oscillation capacitor to the predetermined capacitance value is inhibited from inputting when said switch to enable said temperature compensation function is on, and a signal from said temperature compensation circuit to said oscillation circuit is inhibited from inputting when said switch to disable said temperature compensation function is on.

16. (New) The temperature compensated oscillator according to claim 3, wherein said means for fixing said oscillation capacitor to the predetermined capacitance value is a constant voltage generation circuit.

17. (New) The temperature compensated oscillator according to claim 3, further comprising a selection information storage circuit,

wherein said selection means selects either to enable or disable the temperature compensation function of said temperature compensation circuit, based on the signal from said selection information storage circuit.

18. (New) The temperature compensated oscillator according to claim 17, wherein said selection information storage circuit is composed of a memory with a plurality of bits of which pre-assigned combination enables the temperature compensation function of said temperature compensation circuit.

19. (New) The temperature compensated oscillator according to claim 17, wherein said selection information storage circuit is composed of a conductive pattern and enables the temperature compensation function of said temperature compensation circuit caused by the conductive pattern being switched off.

20. (New) The temperature compensated oscillator according to claim 17, further comprising a compensation data storage circuit which stores temperature compensation data of said temperature compensation circuit,

wherein said selection information storage circuit and said compensation data storage circuit form an integrated storage circuit.

21. (New) A method of manufacturing a temperature compensated oscillator comprising the steps of:

assembling an oscillator in which an IC chip constituting a temperature compensation circuit with an oscillation circuit and a compensation data storage circuit, and a resonator for said oscillation circuit are mounted in a package,

adjusting said resonator with an oscillation frequency of said oscillation circuit to a desired oscillation frequency in condition that said oscillator is kept at a reference temperature, in condition that a temperature compensation function of said temperature compensation circuit is disabled,

sealing said resonator hermetically,

creating temperature compensation data and storing it into said compensation data storage circuit,

and enabling said temperature compensation function of said temperature compensation circuit.

22. (New) The method of manufacturing a temperature compensated oscillator according to claim 21,

wherein said package is put into a constant temperature chamber in order to keep said oscillator at the reference temperature in the step of adjusting said resonator.

23. (New) The method of manufacturing a temperature compensated oscillator according to claim 21,

wherein said package is put into a constant temperature chamber in the step of creating the temperature compensation data and storing it into said compensation data storage circuit.

24. (New) The method of manufacturing a temperature compensated oscillator according to claim 21,

wherein said temperature compensation data is created based on measurement values gained by measuring the oscillation frequency of said oscillation circuit at each of the temperature states and the difference with respect to said desired oscillation frequency with exposure of said oscillator to a plurality of temperatures, in the step of creating the temperature compensation data and storing it into said compensation data storage circuit.

25. (New) The method of manufacturing a temperature compensated oscillator according to claim 24,

wherein the plurality of temperatures in which said oscillator is exposed to are set at appropriate points in an operation guaranteed temperature range of said oscillator.

26. (New) The method of manufacturing a temperature compensated oscillator according to claim 25,

wherein said operation guaranteed temperature range is from minus 40°C to plus 100°C, and a number of said points is 11.

27. (New) The method of manufacturing a temperature compensated oscillator according to claim 21,

wherein the temperature compensation function is enabled by particular selection information in the step of enabling the temperature compensation function of said temperature compensation circuit.

28. (New) The method of manufacturing a temperature compensated oscillator according to claim 27,

wherein said particular selection information is the information with the pre-assigned combination of a plurality of bits.

29. (New) The method of manufacturing a temperature compensated oscillator according to claim 21,

wherien the step of adjusting said resonator is performed by the steps of:

depositing a metal film on a surface of said resonator allowing a resonant frequency to be lower than the reference frequency in advance, and

applying an ion beam to an electrode film on the surface of said resonator or sputter etching for the electrode film to gradually decrease the mass of the electrode film.